

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 22, 2007 has been entered. Claims 1 and 3-11 remain pending in the application.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on October 22, 2007 is noted. The submission is in compliance with the provisions of 37 CFR 1.97 and 1.98. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 3-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al. (previously cited) in view of Noguchi et al. (previously cited) and Kusano et al. (5041304). Higuchi et al. and Noguchi et al. as mentioned in the applicant's specification (see specification, pages 3-6) disclose the known process of surface treating an inner surface of a vacuum member by first mechanically polishing

Art Unit: 3723

the vacuum member with a liquid medium containing hydrogen atoms, then subjecting the vacuum member to a chemical or electrochemical polishing process. Higuchi et al. and Noguchi et al. also disclose the use of an oxidizing material formed as water which could be added to the liquid medium (see paragraph 6 of Higuchi et al.) however Higuchi et al. and Noguchi et al. lack a liquid medium absent of any hydrogen atoms where said liquid medium being a hydrocarbon in a molecule of which the hydrogen atom or hydrogen atoms are all substituted with a fluorine atom or fluorine atoms. However, Kusano et al. teaches of a surface treatment method including, an unsaturated hydrocarbon compound (column 2, Line 57) under ordinary pressure (atmospheric is considered ordinary, column 2, Lines 14-21) and ordinary temperature (column 4, Line 62) and wherein the hydrogen atoms are replaced with fluorine atoms (column 2, Line 57-61) for imparting a low surface energy thereby providing a smooth surface on the workpiece. The compound disclosed by Kusano et al. is a gaseous compound however regardless of the medium, gas, liquid or even solid, since Kusano et al. teaches a compound having the same effect or benefit as claimed by the applicant, which is to impart a smooth surface on the workpiece, the mediums could be interchangeable. Therefore, Kusano et al. is used to teach of a medium including hydrocarbon compound including hydrogen atoms, where said hydrogen atoms are replaced with fluorine atoms. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the liquid medium used in the known process, of Higuchi et al. and Noguchi et al. with a liquid medium formed as an unsaturated hydrocarbon compound under ordinary pressure and ordinary temperature,

wherein the hydrogen atoms are replaced with fluorine atoms, as taught by Kusano et al., in order to provide a workpiece having a reduced surface energy and a low coefficient of friction thereby providing for a much smoother surface.

5. Claims 1 and 3-11 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al. (previously cited) in view of Noguchi et al. (previously cited) and Yoneda (JP 11329896). Higuchi et al. and Noguchi et al. as mentioned in the applicant's specification (see specification, pages 3-6) disclose the known process of surface treating an inner surface of a vacuum member by first mechanically polishing the vacuum member with a liquid medium containing hydrogen atoms, then subjecting the vacuum member to a chemical or electrochemical polishing process. Higuchi et al. and Noguchi et al. also disclose the use of an oxidizing material formed as water which could be added to the liquid medium (see paragraph 6 of Higuchi et al.) however Higuchi et al. and Noguchi et al. lack a liquid medium absent of any hydrogen atoms where said liquid medium being a hydrocarbon in a molecule of which the hydrogen atom or hydrogen atoms are all substituted with a fluorine atom or fluorine atoms. However, Yoneda also teaches of using a liquid medium (Paragraph 12) that only consists of fluorine-based atoms (i.e. Fluorocarbon which can be formed as Freon and the applicant disclosed that Freon is a liquid medium including no hydrogen atoms, see specification page 16, lines 19 and 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the liquid medium used in the known process, of Higuchi et al. and Noguchi et al. with a liquid medium formed as

an unsaturated hydrocarbon compound under ordinary pressure and ordinary temperature, wherein the hydrogen atoms are replaced with fluorine atoms, as taught by Yoneda, in order to prevent the workpiece from reacting with water thereby increasing the quality of the device.

Response to Arguments

6. Thee applicant has not provided any arguments submitted with the RCE therefore the previous arguments were already dealt with in the advisory action mailed on October 10, 2007.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Scruggs whose telephone number is 571-272-8682. The examiner can normally be reached on Monday-Friday, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Art Unit: 3723

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David B. Thomas/

Primary Examiner, Art Unit 3723

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